Amendments to the Specification:

Please amend the specification as follows:

In the paragraph beginning at page 7 line 27, amend as follows:

In the temperature reduction immediately after the heat treatment, pressure reduction follows temperature change. If a heating vessel is abruptly decompressed at this time, the internal pressure of the wire is increased as compared with the external ~~wire~~ pressure, to blister the wire. According to the preferred aspect of the present invention, however, the gas is injected to supplement pressure reduction resulting from temperature reduction, whereby the wire can be prevented from blistering resulting from abrupt decompression in the temperature reduction immediately after the heat treatment.

In the paragraph beginning at page 9 line 15, amend as follows:

Preferably in the aforementioned method of manufacturing an oxide superconducting wire, the decompression rate for the total pressure in the pressurized atmosphere is controlled to not more than 0.05 MPa/min if the total pressure of the pressurized atmosphere is at least 1 MPa in the heat treatment step.

In the paragraph beginning at page 22 line 21, amend as follows:

Then, the metal ~~wire~~ tube charged with the raw material powder is worked into a wire of a desired diameter by wire drawing (step S2). Thus, a wire having a configuration obtained by covering the raw material powder for the oxide superconducting wire with a metal is obtained. In order to manufacture a multifilamentary wire, a plurality of drawn wires are inserted into a metal tube, to be further subjected to wire drawing. Primary rolling is performed on this wire (step S3), and first heat treatment is thereafter performed (step S4). An oxide superconducting phase is formed from the raw material powder through these operations. Secondary rolling is performed on the heat-treated wire (step S5). Thus, voids resulting from the first heat treatment are removed. Second heat treatment is performed on the secondarily rolled wire (step S6). Sintering of the oxide superconducting phase

progresses and the oxide superconducting phase is singularized at the same time through the second heat treatment.

In the paragraph beginning at page 24 line 12, amend as follows:

Referring to Figs. 5(a) to 5(d), the contact area between the oxide superconducting crystals formed in the heat treatment is increased by plastic flow when the heat treatment is performed in a pressurized atmosphere, to reduce the number of gaps of several μm to several [[10]] tens μm present between the superconducting crystals (Fig. 5(a) → Fig. 5(b)). When this state is held, creep deformation is caused as shown in Fig. 5(c) to contract the gaps present on a junction interface while a contaminated portion such as an oxide film is partially broken/decomposed to cause diffusion of atoms and progress sintering. Finally, most of the gaps between the superconducting crystals disappear as shown in Fig. 5(d), to form a stable junction interface.

In the paragraph beginning at page 27 line 11, amend as follows:

Referring to Fig. 7, the partial oxygen pressure is equivalent to the level of 0.2 atm. (0.02 MPa) shown by a dotted line when the total ~~atmosphere~~ pressure of the pressurized atmosphere is at the atmospheric pressure of 1 atm. (0.1 MPa), for example, whereby a Bi2223 phase is stably formed without partial oxygen pressure control. As the total pressure of the pressurized atmosphere is increased to 2 atm. (0.2 MPa), 3 atm. (0.3 MPa) , however, the partial oxygen pressure is also increased to exceed the level of 0.2 atm. (0.02 MPa) shown by the dotted line. Consequently, the Bi2223 phase is not stably formed. Therefore, the partial oxygen pressure must be controlled to at least 0.003 MPa and not more than 0.02 MPa by changing the mixing ratio of oxygen gas in the mixed gas, as shown in Fig. 8. The dotted line in Fig. 8 shows the level of 0.2 atm. (0.02 MPa), similarly to the dotted line in Fig. 7.

In the paragraph beginning at page 28 line 11, amend as follows:

When the heat treatment is performed in the pressurized atmosphere of at least 1 MPa, external gas conceivably infiltrates into the wire through pinholes of the wire to equalize the internal and external pressures of the wire with each other. The inventors has found that gas emission from the inside cannot follow reduction of the external pressure and the internal pressure exceeds the external pressure to form blisters when the external pressure is reduced due to abrupt decompression in such a high-pressure atmosphere.

In the paragraph beginning at page 51 line 27, amend as follows:

$F_t = [[M_t]]\ \underline{M_f} - W \ldots (1)$

In the paragraph beginning at page 53 line 4, amend as follows:

Referring to Fig. 24, the critical current values of oxide superconducting wires having sintering densities of not more than about 95 % are less than 80 A, while the critical current values of oxide superconducting wires having sintering densities of at least about 95 % are mainly in a range exceeding 80 A. The critical ~~density~~ current value is obtained by multiplying the critical current density by the sectional area of the oxide superconductor filament, and hence the critical current density is proportionate to the critical current value. Therefore, the critical current density is improved in an oxide superconducting wire having a high sintering density. This is conceivably because a large quantity of current flows through the superconductor filament since the number of gaps between crystals of the superconductor filament is small in the oxide superconducting wire having a high sintering density.

In the paragraph beginning at page 55 line 8, amend as follows:

Preferably in the aforementioned manufacturing method, pressurization is started after the temperature of the atmosphere exceeds 600°C in temperature increase before heat treatment in the heat treatment step.

In the paragraph beginning at page 55 line 24, amend as follows:

Preferably in the aforementioned manufacturing method, the heat treatment step is carried out in an oxygen atmosphere, and the partial oxygen pressure is at least 0.003 MPa and not more than 0.02 MPa.